

Atty Dkt. No.: CATH-001  
U.S. Application Serial No. 10/803,468

### **AMENDMENTS**

Please amend the above -identified application as follows:

**In the claims:**

1. (Currently Amended) A method for removing an agent from a physiological efferent fluid collection site **of a body**, said method comprising:  
Introducing a non-occlusive aspiration element to a target site at least proximal to said physiological efferent fluid collection site; and  
activating said aspiration element when said agent is at least predicted to be present in said target site to selectively remove **fluid comprising** said agent from said physiological efferent fluid collection site;  
**wherein said removed fluid is not returned to the body.**
2. (Original) The method according to Claim 1, wherein said physiological efferent fluid collection site is a vascular fluid collection site.
3. (Original) The method according to claim 2, wherein said vascular fluid collection site is a cardiovascular fluid collection site.
4. (Original) The method according to Claim 3, wherein said cardiovascular fluid collection site is a coronary cardiovascular fluid collection site.
5. (Original) The method according to Claim 4, wherein said coronary cardiovascular fluid collection site is a coronary sinus.
6. (Original) The method according to Claim 1, wherein said physiological efferent fluid collection site is present in a mammal.

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7. (Original) The method according to Claim 6, wherein said mammal is a human.
8. (Original) The method according to Claim 1, wherein said agent is a therapeutic agent.
9. (Original) The method according to Claim 1, wherein said agent is a diagnostic agent.
10. (Original) The method according to Claim 9, wherein said diagnostic agent is a contrast agent.

Claims 11-21. (Cancelled)

22. (Currently Amended) A system for selectively removing an agent from a physiological efferent fluid collection site, said system comprising:
  - (a) a non-occlusive aspiration lumen;
  - (b) an aspiration mechanism operatively connected to said non-occlusive aspiration lumen;
  - (c) an actuation controller element for controlling actuation of said aspiration mechanism; and
  - (d) a detector for at least predicting the presence of said agent in said physiological efferent fluid collection site; **wherein said detector is located upstream of said non-occlusive aspiration element.**

23. (Original) The system according to Claim 22, wherein said system further comprises a feedback element from said detector to said actuation controller element.
24. (Original) The system according to Claim 23, wherein said actuation controller element selectively actuates in response to signals from said feedback element.

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25. (Original) The system according to Claim 22, wherein said controller element is an adaptive controller element.

26. (Original) The system according to Claim 22, wherein said aspiration lumen is present in an elongated tubular structure.

27. (Original) The system according to Claim 26, wherein said elongated tubular structure is a catheter device.

Claims 28-42 (Cancelled)

43. (Currently Amended) A device for selectively removing an agent from a physiological efferent fluid collection site, said device comprising:

(a) a non-occlusive aspiration lumen present in an elongated tubular structure having a fenestrated distal end;

(b) an aspiration mechanism operatively connected to said non-occlusive aspiration lumen; **and**

(c) an actuation controller element for controlling actuation of said aspiration element; **and**

**(d) a detector for at least predicting the presence of said agent in said physiological efferent fluid collection site, wherein said detector is located at an location of said non-occlusive aspiration element.**

44. (Original) The device according to Claim 43, wherein said elongated tubular structure comprises an expandable distal end.

45. (Original) The device according to Claim 43, wherein said elongated tubular structure comprises a non-expandable distal end.

46. (Original) The device according to Claim 43, wherein said fenestrated distal end

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comprises sealable fenestrae.

47. (Original) The device according to Claim 43, wherein said fenestrated distal end comprises non-sealable fenestrae.

48. (Original) The device according to Claim 43, wherein said fenestrated distal end comprises both sealable and non-sealable fenestrae.

49. (Original) The device according to Claim 43, wherein said device further comprises a positioning and/or retaining element.

50. (Original) The device according to Claim 43, wherein said elongated tubular structure comprises an open distal end.

51. (Original) The device according to Claim 43, wherein said elongated tubular structure comprises a sealed distal end.

Claims 52-65 (Cancelled)

66. (Currently Amended) A kit for selectively removing an agent from a physiological efferent fluid collection site, said kit comprising:

- (a) an aspiration element comprising:
  - (i) a non-occlusive aspiration lumen;
  - (ii) an aspiration mechanism operatively connected to said non-occlusive aspiration lumen;
  - (iii) an actuation controller element for controlling actuation of said aspiration element; and
  - (iv) a detector for at least predicting the presence of said agent in said physiological efferent fluid collection site, wherein said detector is located at an upstream location of said non-occlusive aspiration**

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**element; and**

- (b) instructions for practicing the method of Claim 1.

Claims 67-79 (Cancelled)

Please enter the following new claims:

80. (New) The method according to Claim 1, wherein said non-occlusive aspiration element comprises a detector for at least predicting the presence of said agent in said physiological efferent fluid collection site, wherein said detector is located at an upstream location of said non-occlusive aspiration element.

81. (New) The method according to Claim 80, wherein said detector is a fiber-optic detector.

82. (New) The system according to Claim 22, wherein said detector is a fiber-optic detector.

83. (New) The device according to Claim 43, wherein said detector is a fiber-optic detector.

84. (New) The kit according to Claim 66, wherein said detector is a fiber-optic detector.